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ABSTRACT

The National Assessment of Educational Progress (NAEP) is a survey of U.S. student knowledge and skills in different subjects at grades four, eight, and 12. NAEP combines samples of performances to provide information about the knowledge and skills of students in the United States as a whole, in each participating state, and in different demographic groupings. The report aims to increase understanding of the achievement levels for the National Assessment of Educational Progress: what they are, and what they are not. It is a reference for the U.S. public, particularly educators, parents, students, and policymakers. Seven booklets make up the report. Each booklet focuses on one of the subjects for which NAEP achievement levels have been set. This booklet focuses on geography. Information in the booklet can be helpful in interpreting accurately the meaning of the geography NAEP achievement levels and student performance relative to the levels. Achievement levels are: basic, proficient, and advanced. The report explains that there are three parts to NAEP achievement levels: (1) descriptions; (2) cutscores; and (3) sample items. It further explains that the achievement level descriptions are statements of what students should know and be able to achieve at each level. The cutscores represent the minimum score required for performance at each NAEP achievement level and are usually reported along with the percentage of students who scored at or above the level. Sample items provide illustration of student knowledge and skills required within each level of achievement. (BT)

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NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS
ACHIEVEMENT LEVELS
1992-1998

SO 034 423

National Assessment of Educational Progress
National Assessment Governing Board
U.S. Department of Education

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National Assessment of Educational Progress Achievement Levels 1992–1998 for Geography

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July 2001

National Assessment of Educational Progress
National Assessment Governing Board
U.S. Department of Education

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Understanding Achievement Levels for the Geography National Assessment of Educational Progress

Purpose of This Report

The purpose of this report is to increase understanding of the achievement levels for the National Assessment of Educational Progress (NAEP): what they are, and what they are **not**. The report is a reference for the American public, especially educators, parents, students, and policymakers. Seven booklets make up the report; each booklet focuses on one of the subjects for which NAEP achievement levels have been set. These include mathematics, science, reading, writing, civics, U.S. history, and geography.

The information in this report will be helpful in interpreting accurately the meaning of the *Geography* NAEP achievement levels and student performance relative to the levels. The information will also aid in understanding the NAEP reports, commonly known as *The Nation's Report Card*.

What Is the National Assessment of Educational Progress?

NAEP is a survey of American students' knowledge and skills in different subjects at grades 4, 8, and 12. NAEP combines the samples of performances to provide information about the knowledge and skills of students in the nation as a whole, in each participating state, and in different demographic groupings.

What Are NAEP Achievement Levels?

Congress authorized the National Assessment Governing Board (NAGB) to set achievement goals for student performance on NAEP. NAGB identified and defined the goals in terms of three levels of achievement: Basic, Proficient, and Advanced. NAEP achievement levels define ***what students should know and be able to do*** at the Basic, Proficient, and Advanced levels established by NAGB.

There are three parts to NAEP achievement levels: descriptions, cutscores, and sample items. The achievement levels descriptions are statements of what students should know and be able to do at each level. The cutscores represent the minimum score required for performance at each NAEP achievement level and are usually reported along with the percentage of students who scored at or above the level. Sample items provide illustrations of student knowledge and skills required within each level of achievement.

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What Constitutes Basic, Proficient, and Advanced Achievement?

Proficient achievement is defined by NAGB as ***"solid academic performance*** exhibiting competency over challenging subject matter." The Basic and Advanced achievement levels are defined relative to this central level. Basic achievement is performance that exhibits ***"partial mastery*** over skills fundamental to Proficient performance." Advanced achievement exhibits ***superior performance***. Achievement that is less than partial mastery is referred to simply as "below Basic."

How Good Is Good Enough?

The overall achievement goal for American students is performance that qualifies at the Proficient level or higher. Meeting this goal for the nation as a whole will take time. Competency over challenging subject matter is not easily attained. The average performance score on NAEP in most subjects falls within the Basic achievement level.

How Should Achievement Levels Be Interpreted?

Unlike most assessments, there are no individual scores on NAEP. Achievement levels define performance, not students. Notice that there is no mention of "at grade level" performance in these achievement goals. In particular, it is important to understand clearly that the Proficient achievement level does not refer to "at grade" performance. Nor is performance at the Proficient level synonymous with "proficiency" in the subject. That is, students who may be considered proficient in a subject, given the common usage of the term, might not satisfy the requirements for performance at the NAEP achievement level. Further, Basic achievement is more than minimal competency. Basic achievement is less than mastery but more than the lowest level of performance on NAEP. Finally, even the best students you know may not meet the requirements for Advanced performance on NAEP.

How Are the Achievement Levels Developed?

The achievement levels-setting process is carefully designed, implemented, and evaluated with great attention to detail and technical precision. The process of developing achievement levels involves the judgments of informed, well-qualified people from throughout the nation and its territories. Approximately 30 persons serve on each of three grade-level panels to develop NAEP achievement levels. These 90 panelists include teachers (about 55 percent), other educators (about 15 percent), and members of the general public (about 30 percent). To the extent possible, the panels are proportionally representative of the nation's population with respect to region, race/ethnicity, and gender.

Panelists participate in a five-day process that includes training and instruction to prepare them for the standard-setting tasks. Panelists make three separate sets of judgments of student performance on NAEP items, and they receive a variety of feedback information about the implications of their judgments. Sophisticated psychometric methods are used to produce the feedback and guide the process.

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Highly experienced staff and technical advisors carefully monitor the achievement levels-setting process. Panelists evaluate every conceivable aspect of the process, and their responses are fully analyzed. Extensive analyses are conducted to determine whether panelists seemed to be making logical, informed judgments and whether similar panelists would make similar judgments. Yet, there is no way of knowing that the standards are "right" because there is no true standard against which to evaluate the panelists' judgments.

Who Sets the Achievement Levels?

Under the law, the National Assessment Governing Board is the final authority on determining the levels and their use for reporting NAEP performance results. The Board reviews information about the process for setting the achievement levels and panelists' opinions of it. NAGB considers the recommendations of panelists and technical advisors regarding the levels. The Board also considers additional information about student course-taking patterns in the subject area and student performance on other assessments in the subject. NAGB then judges whether the standards are reasonable and makes the final decisions for setting the standards. The panels for geography were convened in November 1994, and NAGB set the Geography NAEP Achievement Levels in August 1995.

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Overview of the Framework for the National Assessment of Educational Progress in Geography

This section provides a brief overview of the Geography Framework for the National Assessment of Educational Progress (NAEP) that details what is assessed by the Geography NAEP. The framework defines the structure, organization, and general content for the assessment. Many questions must be answered before an assessment can be developed, and answers to those questions are presented in the framework.

What Is the Geography NAEP Framework?

What constitutes geography education? Geography uses a spatial perspective to study the arrangement and interaction of people and places over Earth's space. By understanding and using a spatial perspective, students seek answers to the questions: What is it? Where is it? Why is it there? What is the significance of its location?

The NAEP framework must delineate aspects of geography knowledge and skills to be assessed. It identifies different components of geography knowledge and skills to be assessed, and it indicates the level of emphasis that should be given to each. The framework is **the** guide to the assessment. The framework shapes the development of items and determines how student responses will be scored. It guides the development of descriptions of performances required for each of the NAEP achievement levels.[1]

How Was the Framework Developed?

A national consensus process was used to develop the content of the framework documents for the Geography NAEP and the other assessments. Panels of content experts, practitioners, and professionals in related fields developed the Geography NAEP Framework to reflect the input collected from groups of scholars, state and local educators, practitioners, and other interested citizens. The need for geographically knowledgeable citizens is both clear and widely acknowledged. The framework committee identified the fundamental knowledge and skills that students should master to be informed and productive citizens in the global economy of the 21st century.

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[1]Frameworks are available on the Internet at *www.nagb.org*. Printed copies of the framework for Geography and for other NAEP subjects are available from the National Assessment Governing Board. Copies are also available through the U.S. Department of Education's ED Pubs information center at 1-877-4ED-Pubs.

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What Are the Components of the Assessment Framework?

The general goal for the Geography NAEP is to assess how well students *know, understand,* and *apply* information about the three broad content areas identified for the geography assessment: space and place, environment and society, and spatial dynamics and connections.

1. ***Space and Place.*** This content area includes knowledge of geography as it relates to particular places on Earth, spatial patterns on the Earth's surface, and the physical and human processes that shape such spatial patterns. This content area requires students to know the difference between human and physical forces and the differences between patterns generated by human forces and those generated by physical forces. Students must understand how characteristics of both human and physical forces are spatially distributed. The knowledge and skills included in this content area serve as the foundation for knowledge and skills in the following two content areas.

2. ***Environment and Society.*** This content area includes knowledge of geography as it relates to the interaction between the environment and society. The ways humans adapt to and modify the environment are of continual and increasing importance. Students must understand the relationship between humans and their environment and be aware that outcomes of these interactions are subject to interpretations by different interests. Perspectives on the goals for the interaction of humans with their environment differ greatly, and students must consider various interests as they evaluate decisions about the interaction of environment and society.

3. ***Spatial Dynamics and Connections.*** This content area refers to knowledge of geography as it relates to spatial connections among people, places, and regions. Geography's spatial perspective helps students understand the dynamics of connections among people, places, and regions. Connections are formed when people, ideas and beliefs, and products move from place to place. It is important for students to understand the dynamics of such spatial connections, and this requires that they understand the many factors involved.

The framework describes four major topics and several subtopics for each content area. Sample objectives for each grade are listed for each subtopic. The distribution of items in each content area is equal across the three grades assessed by NAEP. Approximately 40 percent of the items assess the *space and place* content dimension, 30 percent assess the *environment and society* content dimension, and 30 percent assess *spatial dynamics and connections.*

The cognitive tasks, however, reflect differences in expectations across the three grade levels (see Table 1). Exercises requiring *knowing* are emphasized at grade 4, and exercises requiring *applying* are emphasized at grade 12.

Table 1. Distribution of Exercise Pool Across Cognitive Dimension: Grades 4, 8, and 12

	Knowing	Understanding	Applying*
Grade 4	45%	30%	25%
Grade 8	40%	30%	30%
Grade 12	30%	30%	40%

*Applying = a range of higher-order thinking skills.

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The framework developers recommended that the assessment be structured so that students would spend no more than approximately 50 percent of the assessment time responding to multiple-choice items. The remaining time should be spent constructing responses to exercises that require short responses of only a few words; extended responses of one or more paragraphs; or production exercises that require creating maps, graphs, charts, and so forth. No more than 20 percent of the assessment time should be allocated to production exercises. The mix of item formats changes across grade levels; fourth graders have fewer extended response items than students at higher grade levels.

Achievement Levels: Descriptions and Cutscores

Note: The performance of students on the Geography NAEP is reported on a scale of 0 to 500. The average score is 250 (anchored at Grade 8) with a standard deviation of 50 scale score points.

GRADE 4

Basic (187)

Students should be able to use words or diagrams to define basic geographic vocabulary; identify personal behaviors and perspectives related to the environment and describe some environmental and cultural issues in their community; use visual and technological tools to access information; identify major geographic features on maps and globes; be able to read and draw simple maps, map keys, and legends; demonstrate how people depend upon, use, and adapt to the environment; and give examples of the movement of people, goods, services, and ideas from one place to another. In addition to demonstrating an understanding of how individuals are alike and different, they should demonstrate a knowledge of the ways people depend on each other.

Proficient (240)

Students should be able to use fundamental geographic knowledge and vocabulary to identify basic geographic patterns and processes; describe an environmental or cultural issue from more than one perspective; and read and interpret information from visual and technological tools such as photographs, maps and globes, aerial photography, and satellite images. They should be able to use number and letter grids to plot specific locations; understand relative location terms; and sketch simple maps and describe and/or draw landscapes they have observed or studied. Proficient students should be able to illustrate how people depend upon, adapt to, and modify the environment; describe and/or illustrate geographic aspects of a region using fundamental geographic vocabulary and give reasons for current human migration; discuss the impact a location has upon cultural similarities and differences; and be able to demonstrate how an event in one location can have an impact upon another location.

Advanced (276)

Students should be able to use basic geographic knowledge and vocabulary to describe global patterns and processes; describe ways individuals can protect and enhance environmental quality; describe how modifications to the environment may have a variety of consequences; explain differing perspectives that apply to local environmental or cultural issues; and demonstrate an understanding of forces that result in migration, changing demographics, and boundary changes. They should be able to solve simple problems by applying information learned through working with visual and technological tools such as aerial and other photographs, maps and globes, atlases, news media, and computers. They should be able to construct models and sketch and label maps of their own state, the United States, and the world; use them to describe and compare differences, similarities, and patterns of change in landscapes; and be able to predict the impact a change in one location can have on another. They should be able to analyze the ways individuals and groups interact.

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GRADE 8

Basic (242)

Students should possess fundamental knowledge and vocabulary of concepts relating to patterns, relationships, distance, direction, scale, boundary, site, and situation; solve fundamental locational questions using latitude and longitude; interpret simple map scales; identify continents and their physical features, oceans, and various countries and cities; respond accurately to descriptive questions using information obtained by use of visual and technological tools such as geographic models and/or translate that information into words; explain differences between maps and globes; and find a wide range of information using an atlas or almanac. Students should be able to recognize and illustrate the relationships that exist between humans and their environments and provide evidence showing how physical habitat can influence human activity. They should be able to define a region and identify its distinguishing characteristics. Finally, they should be able to demonstrate how the interaction that takes place between and among regions is related to the movement of people, goods, services, and ideas.

Proficient (282)

Students should possess a fundamental geographic vocabulary; understand geography's analytical concepts; solve locational questions requiring integration of information from two or more sources, such as atlases or globes; compare information presented at different scales; identify a wide variety of physical and cultural features, and describe regional patterns. Students should be able to respond accurately to interpretive questions using geography's visual and technological tools and translate that information into patterns; identify differences in map projections and select proper projections for various purposes; and develop a case study working with geography's analytical concepts. In addition, students should be able to describe the physical and cultural characteristics of places; explain how places change due to human activity; and explain and illustrate how the concept of regions can be used as a strategy for organizing and understanding Earth's surface. Students should be able to analyze and interpret databases and case studies as well as use information from maps to describe the role that regions play in influencing trade and migration patterns and cultural and political interaction.

Advanced (315)

Students should have a command of extensive geographic knowledge, analytical concepts, and vocabulary; be able to analyze spatial phenomena using a variety of sources with information presented at a variety of scales and show relationships between them; and use case studies for spatial analysis and to develop maps and other graphics. Students should be able to identify patterns of climate, vegetation, and population across Earth's surface and interpret relationships between and among these patterns. They should be able to use one category of a map or aerial photograph to predict other features of a place such as vegetation based on climate or population density based on topographic features. Students should also be able to relate the concept of region to specific places and explain how regions change over time due to a variety of factors. They should be able to profile a region of their own design using geographic concepts, tools, and skills.

GRADE 12

Basic (270)

Students should possess a knowledge of concepts and terms commonly used in physical and human geography as well as skills enabling them to employ applicable units of measurement and scale when solving simple locational problems using maps and globes. They should be able to read maps; provide examples of plains, plateaus, hills, and mountains; and locate continents, major bodies of water, and selected countries and cities. They should be able to interpret geographic data and use visual and technological tools such as charts, tables, cartograms, and graphs; know the nature of and be able to identify several basic types of map projections; understand the basic physical structure of Earth; explain and apply concepts such as continental drift and plate tectonics; and describe geography's analytical concepts using case studies. Students should have a comprehensive understanding of spatial relationships including the ability to recognize patterns of phenomena that exist across Earth, including climate regions, time zones, population distributions, availability of resources, vegetation zones, and transportation and communication networks. They should be able to develop data bases about specific places and provide a simple analysis of their importance.

Proficient (305)

Students should have an extensive understanding and knowledge of the concepts and terminology of physical and human geography. They should be able to use geographic concepts to analyze spatial phenomena and to discuss economic, political, and social factors that define and interpret space. They should be able to do this through the interpretation of maps and other visual and technological tools, through the analysis of case studies, the utilization of data bases, and the selection of appropriate research materials. Students should be able to design their own maps based on descriptive data; describe the physical and cultural attributes of major world regions; relate the spatial distribution of population to economic and environmental factors; and report both historical and contemporary events within a geographic framework using tools such as special-purpose maps and primary and secondary source materials.

Advanced (339)

Students should possess a comprehensive understanding of geographic knowledge and concepts; apply this knowledge to case studies; formulate hypotheses and test geographic models that demonstrate complex relationships between physical and human phenomena; apply a wide range of map skills; develop maps using fundamental cartographic principles including translating narratives about places and events into graphic representations; and use other visual and technological tools to perform locational analysis and interpret spatial relationships. Students should also be able to undertake sophisticated analyses from aerial photographs or satellite imagery and other visuals. Advanced students should be able to develop criteria assessing issues relating to human spatial organization and environmental stability and, through research skills and the application of critical thinking strategies, identify alternative solutions. They should be able to compile databases from disparate pieces of information and from these data develop generalizations and speculations about outcomes when data change.

Achievement Levels: Sample Items

Interpreting the Data

Because a representative sample of students at each grade level is selected to take the NAEP, each assessment exercise is administered to a relatively small subsample of students in each grade. Typically, around 10,000 students are assessed in each grade, and each item is administered to just under 2,000 students. The values reported in the tables accompanying each item are probability estimates of performance at each level of achievement for students at each grade level tested in NAEP. The data reported for the sample items show the probability of a correct response to multiple choice items and of a specific score on items requiring students to construct a response. The probabilities are estimates of how students scoring within each range of achievement on the NAEP score scale would perform on each item. These probabilities are, in fact, averages of performance within each achievement level. Some students who score within the Basic range of achievement, for example, will answer a specific multiple choice item correctly and some will not. Furthermore, student performance within the Basic range of achievement may be very near the lower boundary, around the middle, or very near the upper boundary, that is, approaching the Proficient level of achievement. The probabilities reported here are weighted averages to represent performance across the range, with more weight given to scores in the middle of the achievement ranges.

Here is a suggested way to read the data for multiple choice items: "Students performing in the (Basic/Proficient/Advanced) score range have (X) probability of answering this item correctly."

For constructed response items, here is a suggested way to read the data: "Students performing in the (Basic/Proficient/Advanced) score range have (X) probability of giving a response scored at the indicated level (1, 2, 3, etc.) for this sample item."

Grade 4 Sample 1—Basic Performance

Describe two ways in which an increase in the use of cars can affect the environment.

It can poulut the air by smoke going in the air

Probability of a score of 1	
Basic	60%
Proficient	82%
Advanced	94%

Scoring guide

2 = Complete: Correctly identifies two effects of cars on the environment.

1 = Partial: Correctly identifies one effect of cars on the environment. A second effect, if present, is incorrect or trivial, for example, "cars help the environment since less people walk or are outdoors."

0 = Inappropriate: Does not correctly identify any effect of cars on the environment.

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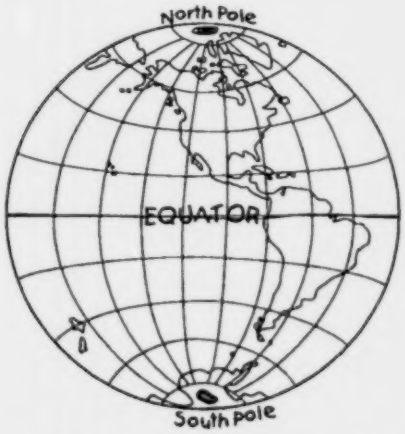
Grade 4 Sample 2—Basic Performance



Probability of a score of 2	
Basic	57%
Proficient	79%
Advanced	90%

Scoring guide

2= Complete: Correctly labels all three features on the map.

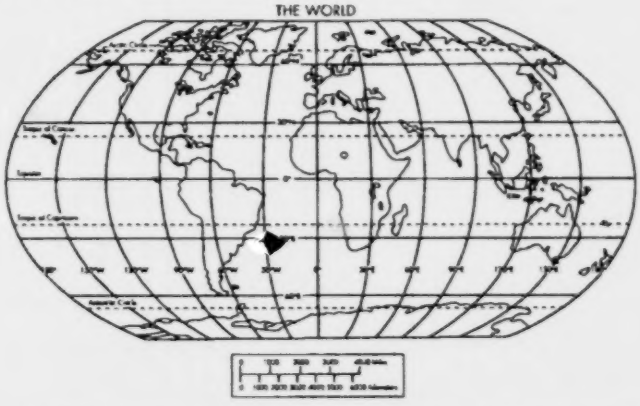
1= Partial: Correctly labels one or two features on the map.

0= Inappropriate: Does not correctly locate any of the three features.

On the map above, write the names of the North Pole, the South Pole, and the equator in the correct location.

Grade 4 Sample 3--Proficient Performance

The following question is based on the following map.



Probability of correct response	
Basic	49%
Proficient	87%
Advanced	98%

A ship carrying cars directly from Japan to Australia travels in which direction?

Ⓐ North

● B South

Ⓒ East

Ⓓ West

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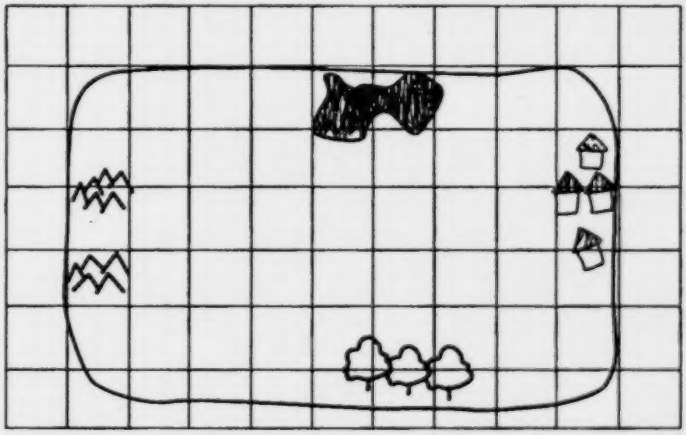
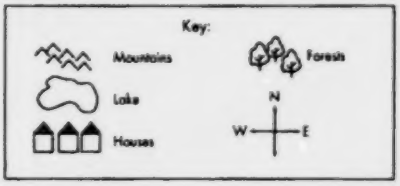
Grade 4 Sample 4—Proficient Performance

1) In the box below, draw a map of an island.
2) On the island, put in the following details:
   - Mountains along the west coast
   - A lake in the north
   - Houses along the east coast
   - Forests in the south

Be sure to use the symbols shown in the key below.

Use your colored pencils to help you draw the map.





Probability of a score of 3	
Basic	45%
Proficient	68%
Advanced	82%

Scoring guide

For ease of scoring, an imaginary pair of intersecting lines may be thought to run through the island in such a way that one line runs north to south, bisecting the island into eastern and western halves, and the other line runs east to west, bisecting the island into northern and southern halves.

3 = Complete: Indicates all of the elements given below.

2 = Essential: Indicates three or four of the elements given below.

1 = Partial: Indicates one or two of the elements given below.

0 = Inappropriate: Does not include any of the elements given below.

Credited Responses:

A – the perimeter of the island is enclosed by a continuous line which may be smooth or jagged or a combination of both.

B – mountains to the west (left) of the imaginary vertical (north to south) line, as close to the western perimeter as possible.

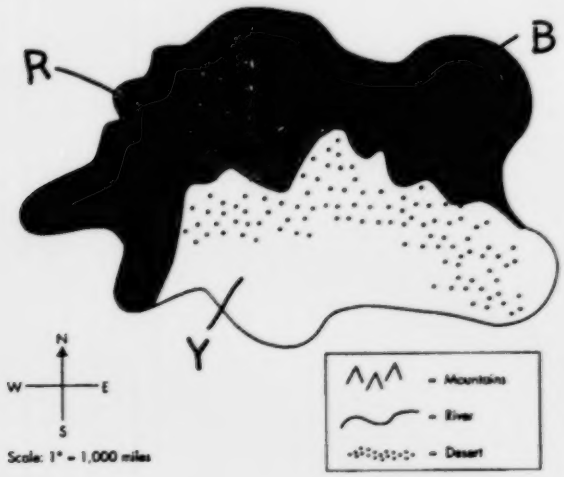
C – lake constructed anywhere within the perimeter north of (above) the imaginary horizontal (east to west) line.

D – houses to the east (right) of the vertical (north to south) line, as close to the eastern perimeter as possible.

E – forest constructed anywhere within the perimeter south (below) of the imaginary horizontal (east to west) line.

Note: If the island is drawn separately from the symbols but the symbols are placed correctly, a score of 2 will be given.

Grade 4 Sample 5—Advanced Performance



Divide the imaginary continent shown above into three countries. The boundaries of these countries should follow the natural features of the continent. Use your colored pencils to draw in the country boundaries and then shade in the three countries in different colors.

Probability of a score of 2	
Basic	12%
Proficient	36%
Advanced	66%

Scoring guide

2 = Complete: Places three boundaries that follow the natural features of the continent and defines only three countries and colors them. Some leeway is allowed for where the mountain range or desert ends.

1 = Partial: Places only one boundary that correctly follows the features of the landscape, and colors in the country, OR response is correct but a section of land is left outside the 3 countries, OR response is correct but the countries are not completely colored in.

0 = Inappropriate: Does not correctly place any of the boundaries.

Grade 4 Sample 6—Advanced Performance

WAYS TO GET RID OF WASTE

- Dumping far out in the ocean
- Burning
- Recycling
- Burying in landfills

From the list above, select one method of getting rid of waste and identify one advantage and one disadvantage of this method.

Method of waste disposal: Dumping far out in the ocean

Advantage: it gets rid of waste on land

Disadvantage: it kills sea animals.

Probability of a score of 2	
Basic	5%
Proficient	37%
Advanced	80%

Scoring guide

2 = Complete: Describes an advantage and disadvantage of one method of waste disposal. Explanations are both specific to that method and geographically logical.

1 = Partial: Describes either an advantage or a disadvantage. A second description, if present, is incorrect or trivial, as in, "dumping waste in oceans has no effect on us," or "it takes a long time to dump waste in oceans."

0 = Inappropriate: Does not accurately describe an advantage or a disadvantage of a given method of waste disposal.

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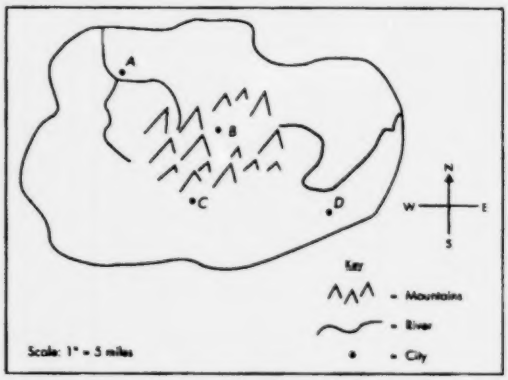
Grade 8 Sample 1—Basic Performance

GRAND ISLAND



Probability of correct response	
Basic	53%
Proficient	86%
Advanced	98%

The island shown on the map above has four cities—A, B, C, and D. Based only on the geographical features shown on the map, which city probably has the largest population?

- (A) City A
- (B) City B
- (C) City C
- (D) City D

Grade 8 Sample 2—Basic Performance

The Image Bank

Probability of correct response	
Basic	59%
Proficient	75%
Advanced	87%

The land shown in the photograph has been altered mainly to

- (A) increase the beauty of the landscape
- (B) increase the availability of land that can be used for farming
- (C) demarcate land belonging to different people
- (D) enable residents to climb the slopes more easily

Grade 8 Sample 3—Proficient Performance

The major areas of wheat production in the world are the central United States and Canada, Ukraine, south central Australia, and the pampas of Argentina. What is the characteristic shared by these areas that explains their role in wheat production?

(A) All have rainy, damp climates.

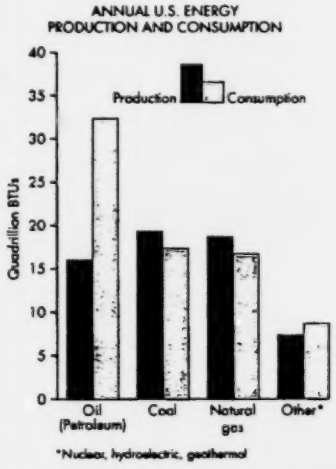
(B) All are near sea coasts.

(C) All are plains.

(D) All are in highland regions.

Probability of correct response	
Basic	48%
Proficient	78%
Advanced	94%

Grade 8 Sample 4—Proficient Performance



Look at the bar graph above. The graph shows United States energy production and consumption.

Using this graph, compare the United States consumption (use) of oil with its production of oil.

We use more oil than we produce.

Name one problem that this can cause for the United States.

We will run out of oil.

Probability of a score of 2	
Basic	34%
Proficient	75%
Advanced	93%

Scoring guide

2 = Complete: Explains that the United States consumes more oil than it produces and explains that this can lead to a problem. (Acceptable answers for production range between 15–20 and acceptable answers for consumption range between 30–35. Answers outside this range cannot be given a score of 2.)

1 = Partial: Explains that the United States consumes more oil than it produces, or identifies a problem with this, but does not do both.

0 = Inappropriate: Does not explain that the United States uses more oil than it produces nor that this may cause a problem.

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Grade 8 Sample 5—Advanced Performance

What are the conditions that make the tundra difficult for human settlement?

The conditions that make the tundra difficult for human settlement are that it is usually very cold there, there is very little vegetation, and the ground is to hard to build a foundation for a house.

Probability of a score of 2	
Basic	7%
Proficient	32%
Advanced	69%

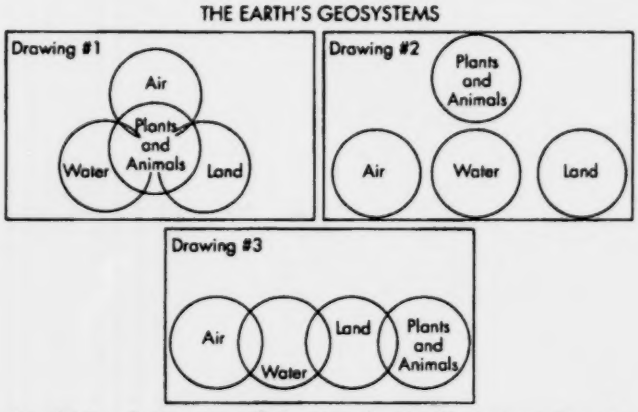
Scoring guide

2 = Complete: Identifies at least two characteristics of the tundra and may explain how these make human settlement difficult.

1 = Partial: Identifies only one characteristic of the tundra and may explain how this makes human settlement difficult.

0 = Inappropriate: Does not identify any characteristics of the tundra nor explain how they make human settlement difficult, OR provides inappropriate answers.

Grade 8 Sample 6—Advanced Performance



Drawing #1 is a better way of showing the Earth's systems than is drawing #2 or drawing #3. Explain why.

#1 shows air, water, and land connected to plants and animals, which represents the plants and animals rely on those 3 things. The other 2 drawings do not show this.

Probability of correct response	
Basic	23%
Proficient	47%
Advanced	72%

Scoring guide

1 = Correct: Explains that diagram 1 shows that the three geosystems are interdependent, OR indicates that plants and animals depend on the other three systems (e.g., plants and animals need air to breathe).

0 = Inappropriate/Incorrect: Does not address the question or gives an inadequate response (e.g., circles are interlinked, connected, rely on each other).

Note: The scoring guide for this item originally included separate scores for incorrect, partially correct, and completely correct. After scaling, partially correct and completely correct responses were combined as correct responses. The student response shown was originally scored as completely correct.

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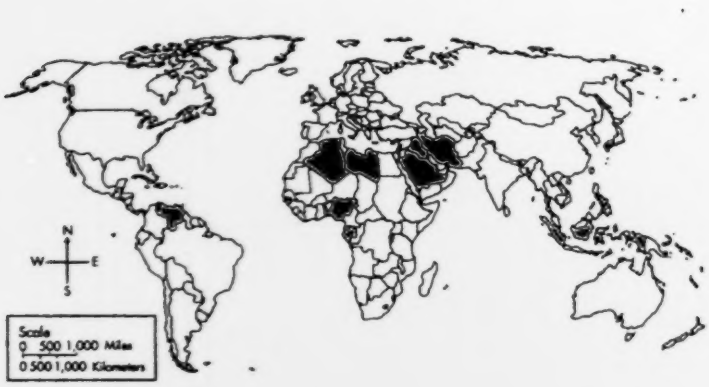
Grade 12 Sample 1—Basic Performance



Probability of correct response	
Basic	64%
Proficient	84%
Advanced	95%

On the map above, the shaded countries represent the membership of the

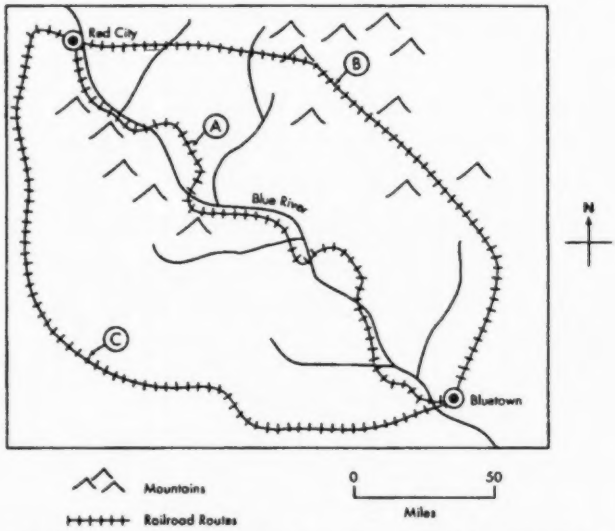
(A) Organization of Petroleum Exporting Countries (OPEC)

(B) World Health Organization (WHO)

(C) North Atlantic Treaty Organization (NATO)

(D) British Commonwealth of Nations

Grade 12 Sample 2—Basic Performance



Probability of a score of 2	
Basic	71%
Proficient	88%
Advanced	96%

Scoring guide

2 = Complete: Indicates that C is the least expensive route to construct and gives two reasons why, which may relate to A and B.

1 = Partial: Indicates that C is the least expensive route to construct and gives one reason why.

0 = Inappropriate: Indicates that A or B would be the least expensive route to construct, OR indicates C, but does not give a reason why.

Look at the map above, which shows three possible routes for a railroad line that will be built to connect Red City with Bluetown.

Which route would be the least expensive to construct?

C

Give two reasons why the route you chose would be the least expensive.

1. You would not have to boure thrue any mountials.

2. You would only have to build one brige.

Grade 12 Sample 3—Proficient Performance

Many people in the Caribbean region are of West African descent. Which of the following is the best explanation for this?

(A) Rapid urbanization

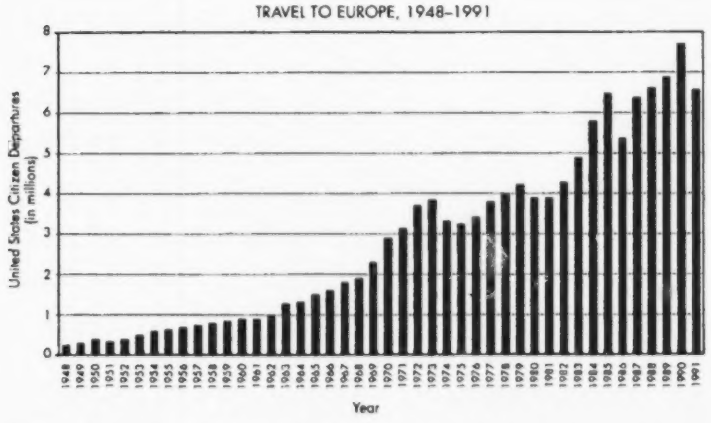
(B) The use of slaves in plantation agriculture

(C) Religious persecution in the countries of origin

(D) Economic opportunity in the Caribbean region

Probability of correct response	
Basic	40%
Proficient	81%
Advanced	99%

Grade 12 Sample 4—Proficient Performance



What is the dominant trend shown in the graph?

More people travel to Europe as time goes by

Give two major reasons for the trend shown.

Europe is easier to reach now and more popular than it was.

Probability of a score of 2	
Basic	20%
Proficient	56%
Advanced	85%

Scoring guide

2= Complete: Identifies the major trend in the graph and provides two appropriate explanations.

1= Partial: Identifies the major trend in the graph but gives either no reason or only one reason to explain this, OR provides two appropriate reasons but fails to identify the trend.

0= Inappropriate: Does not indicate the major trend shown in the graph, but may give one reason for the trend. It may just copy words from the graph.

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Grade 12 Sample 5—Advanced Performance

Mexico City is an example of runaway urban growth. Every day an estimated average of 1,700 people move there from villages in the countryside. In addition, more than 1,000 babies are born in the city daily. Some geographers think that as many as 50 million people will live there by the year 2000. Thousands of families survive on the equivalent of a few dollars a day, and most members of these families have no prospects for steady jobs or much improvement in the physical quality of their lives. However, regardless of the hardship and the poverty, people continue to pour into Mexico City.

Give two reasons why people continue to move to Mexico City despite the difficult living conditions.

People in the rural areas of Mexico might have an even harder life than the people in Mexico City. Also there is always the hope that each person has that he might be the lucky one to find a job. There's more opportunity of finding a job in a big city.

Probability of a score of 2	
Basic	10%
Proficient	35%
Advanced	67%

Scoring guide

2 = Complete: Gives two reasons why people continue to move to Mexico City. Must convey the idea that more opportunities, *not* guarantees, are available.

1 = Partial: Gives one reason that explains why people continue to move to Mexico City.

0 = Inappropriate: Does not give any reason explaining why people continue to move to Mexico City.

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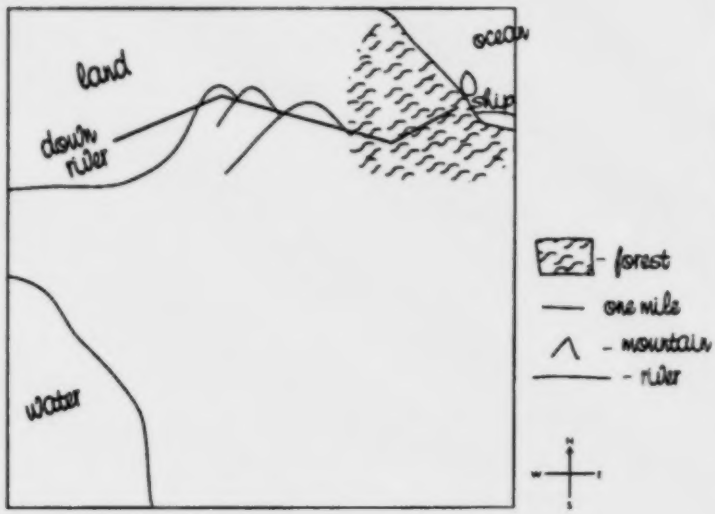
Grade 12 Sample 6—Advanced Performance

After we anchored our ships in the ocean and went ashore to explore, we marched west. The forest was so thick we could only travel three miles in the first two days. Then we came to the mountains and climbed to the top. A rushing river flowed west out of the mountains. We continued to march two miles west and came down out of the mountains. Two miles further we came to the coast. It was obvious that the area we were exploring was an isthmus.

In the box below, draw a map of the region described above. Be sure to include all of the geographical elements mentioned in the description. Include a scale to indicate distances.



Probability of a score of 3	
Basic	25%
Proficient	52%
Advanced	75%

Scoring guide

3= Complete: Draws an accurate map in which at least four elements are correctly placed. The response must be an isthmus and show direction of travel and river correctly. Use of the scale is not necessary to get a 3.

2= Essential: Draws a map in which three elements are correctly placed. The response may be a peninsula or an island.

1= Partial: Draws a map in which at least two elements are correctly placed. No answer that gets direction of map wrong can get more than a 1.

0= Inappropriate: Does not include a map, OR the map shows none of the elements correctly.

Performance Data

Exhibit 1. 1994 Geography NAEP, Grade 4: Percentage of Students At or Above Each Achievement Level

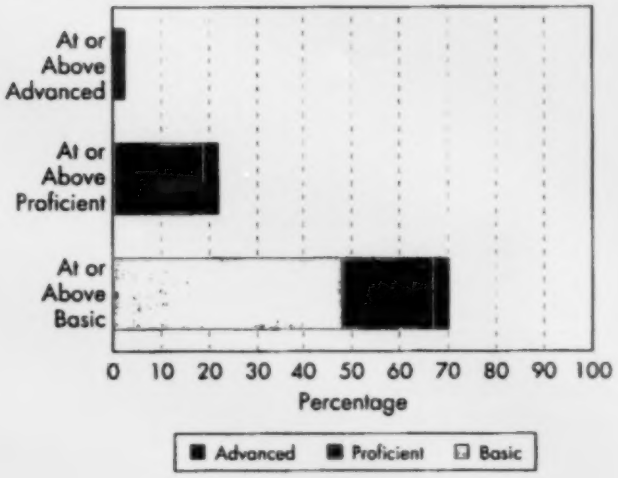


Exhibit 2. 1994 Geography NAEP, Grade 4: Percentage of Students Within Each Achievement Level

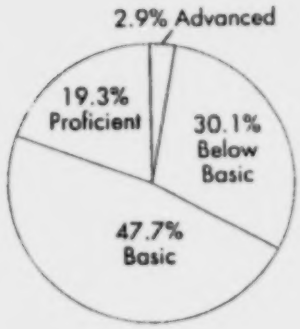


Exhibit 3. 1994 Geography NAEP, Grade 8: Percentage of Students At or Above Each Achievement Level

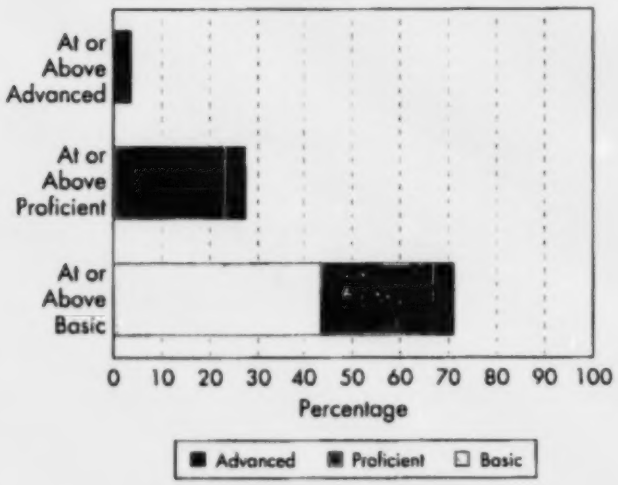


Exhibit 4. 1994 Geography NAEP, Grade 8: Percentage of Students Within Each Achievement Level

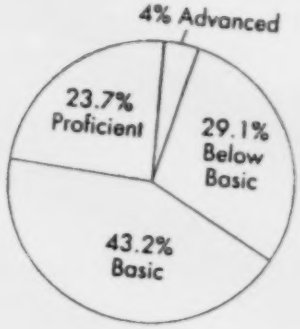


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Exhibit 5. 1994 Geography NAEP, Grade 12: Percentage of Students At or Above Each Achievement Level

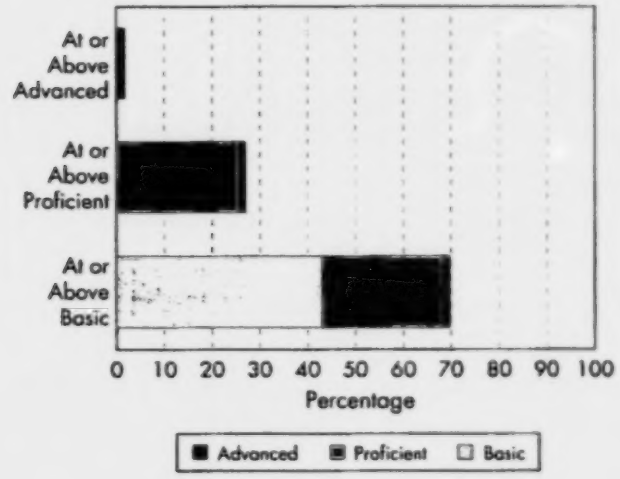


Exhibit 6. 1994 Geography NAEP, Grade 12: Percentage of Students Within Each Achievement Level

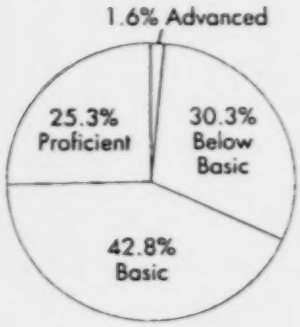
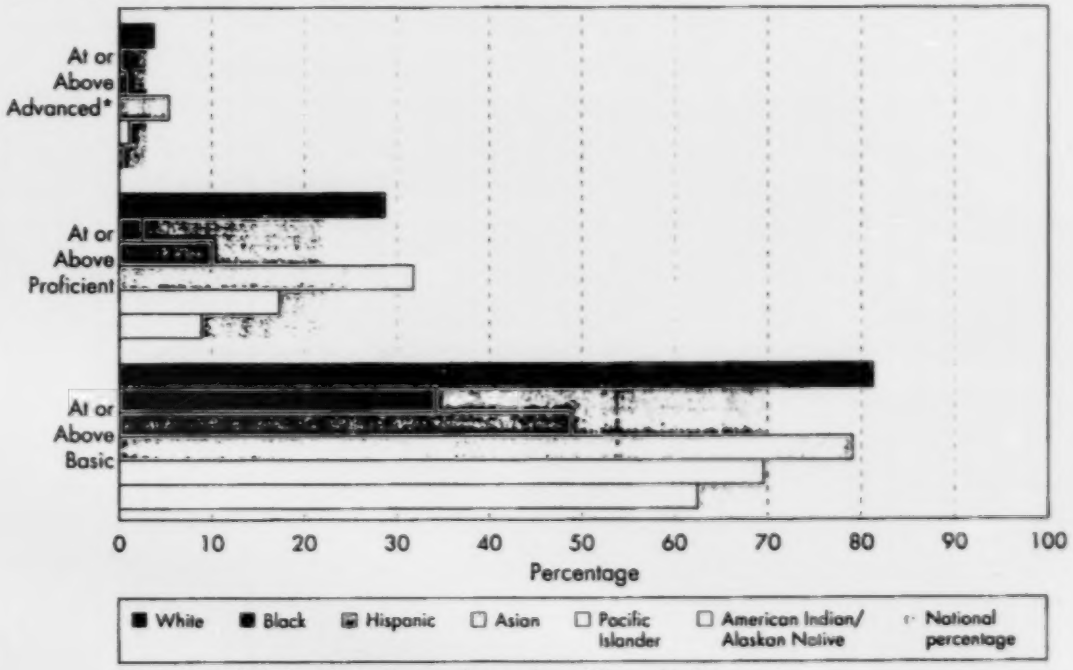


Exhibit 7. 1994 Geography NAEP, Grade 4: Percentage of Students At or Above Each Achievement Level by Race/Ethnicity



*Percentage of Black students who scored at or above Advanced is 0.1.

Exhibit 8. 1994 Geography NAEP, Grade 8: Percentage of Students At or Above Each Achievement Level by Race/Ethnicity

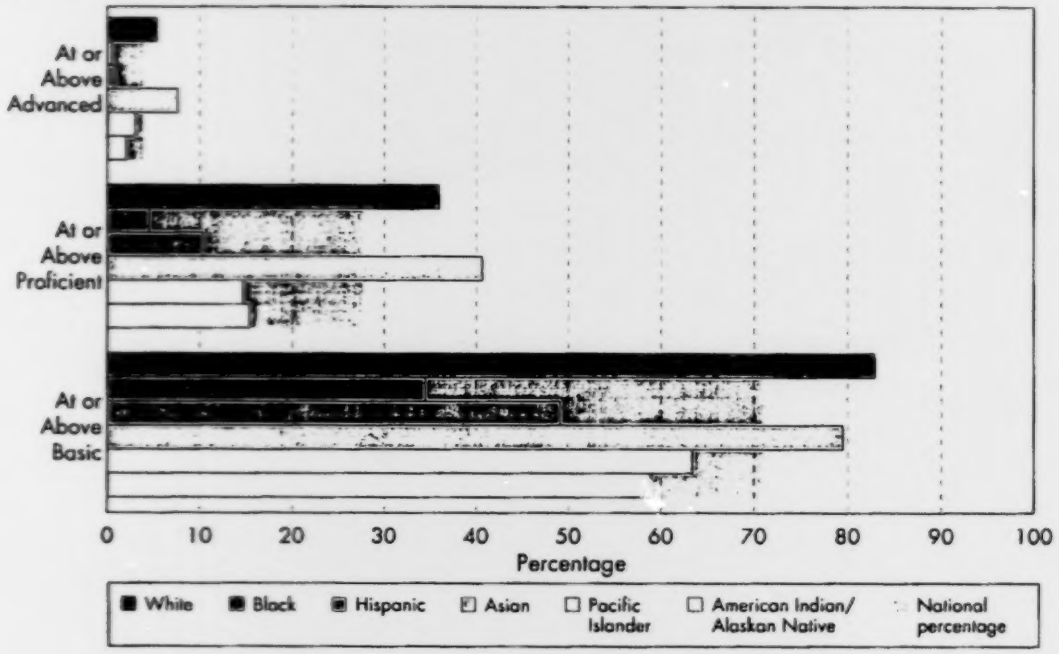
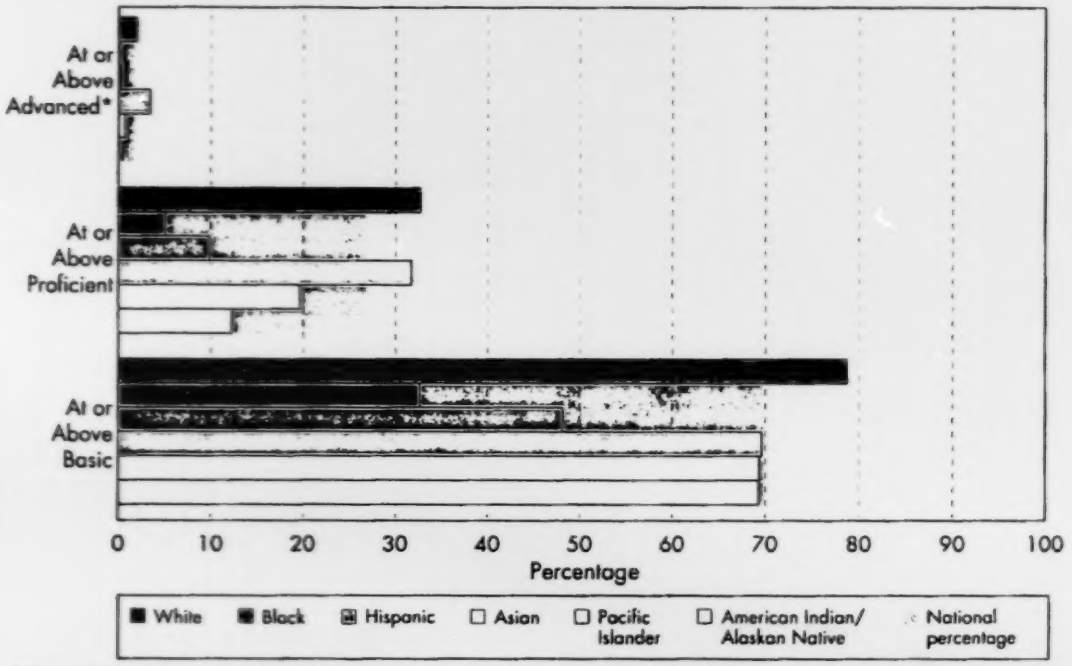
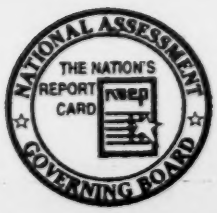


Exhibit 9. 1994 Geography NAEP, Grade 12: Percentage of Students At or Above Each Achievement Level by Race/Ethnicity



*Zero percent of American Indian/Alaskan Native students, 0.1 percent of Black students, and 0.2 percent of Hispanic students scored at or above Advanced. American Indian/Alaskan Native sample size for all levels is insufficient to permit a reliable estimate.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